

# EVALUATION REPORT

## Achieving the Idaho Standards for Rangeland Health

Field Office: **Bruneau (ID 120)**

Evaluation Date(s): **May 18, 2015**

Grazing Allotment Name/Number: **Big Springs 0803 - Black Use Area**

Name of Permittee(s): **Joseph Black and Sons**

### **Introduction**

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Standards and Guidelines) is a suite of management goals used to maintain or improve resources, protect cultural resources and sensitive habitat, and sustain productivity of rangelands. This document provides the evaluation of information presented in the rangeland health assessment (i.e., resource conditions and trends) and indicates whether or not Standards are being achieved. This document also provides a rationale for each evaluation outcome and preliminary finding of causal factors affecting conditions where Standards may not be met.

If one or more Standards are not being met, the BLM will prepare a Determination. Once signed, the Determination is the official document identifying the causal factors for not meeting Standards. The Determination also identifies where there is non-conformance with the Guidelines, if any. The Determination will be prepared concurrently with (or may precede) the grazing permit renewal environmental assessment; which is valuable in the development of grazing management strategies to meet or make progress toward meeting Standards and conform to Guidelines.

Alternative management will be analyzed wherever it is determined that:

- specific grazing allotments are not meeting the Standards
- allotments are meeting the Standards but have site specific concerns
- there are other documented resource concerns or opportunities for improvement/restoration

### **Applicable Standards**

Standards 1 (Watersheds), 2 (Riparian Areas and Wetlands), 3 (Stream Channel and Floodplain), 4 (Native Plant Communities), 7 (Water Quality), and 8 (Threatened and Endangered Plants and Animals) are applicable to the Black Use Area (JB&S) of the Big Springs Allotment.

## **Standard 1: Watersheds**

### **Desired Conditions**

Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to the following:

- The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.
- Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface sealing, and compaction layers below the soil surface is minimal for soil type and landform.

The management objectives identified in the Bruneau MFP identify the need to maintain stability of 660,000 acres of moderate, high, and critical erosion hazard classes by reducing or minimizing wind and water erosion. The moderate erosion class includes all of the Big Springs Allotment. The MFP states that erosion will be minimized by maintaining good perennial vegetation cover where it exists and by establishing perennial vegetation cover where feasible and economical. If establishment is not feasible/economical, manage to achieve stable watershed conditions. To achieve these decisions, livestock management would maintain or improve existing perennial forage plants by not allocating more than 50% of vegetation to consumptive use, adjusting season of use, implementing grazing systems and associated projects, and providing for proper timing with regard to soil moisture content.

### **Pasture 4, All Paddocks**

#### ***Synopsis of Assessment Findings***

The 2004 data indicated none to a slight departure as a whole for site stability and watershed function-related indicators within the A Paddocks. The concave intermound Claypan stand that was reevaluated in 2012 was found to be in reference condition. Trend data during 1983 to 2012 indicated a generally static trend in persistent and non-persistent litter, basal cover of decreaser grasses and of biological soil crusts at 13S2W02. Bare ground was greater in 2000 than in other years, and increaser grass and live vegetation basal cover increased, particularly after 2004. This study site is predominantly increaser grasses with high gravel surface cover, shallower soils, and lower potential for change in biotic cover than 13S02W16. A static trend in desirable components is acceptable in stands that have reached their potential composition and cover, although temporal variability may still occur. Trend data indicated a fluctuating but generally static trend in bare ground, live vegetation basal cover, and persistent litter at 13S02W16. It has slightly deeper soils, less surface gravel, and higher increaser and decreaser grass basal cover. Live vegetation reached its highest values in 1987 and 2012 after periods of above-normal crop year precipitation. Basal cover of increaser grasses was static between 1983 and 2012, but decreaser grass and biological soil crust basal cover increased after 2004.

The 2004 data indicated a slight to moderate departure as a whole for the site stability and watershed function-related Indicators within the B paddocks. The two silty-soiled low mound Claypan stands (12S02W26A and 26B) were judged to have minor active erosion in 2004, with bare and crusted areas

interpreted as deposition ponding and pedestalling interpreted as evidence of slight active erosion. On other Claypan stands erosional processes were mostly historic in nature.

The 2004 data indicated a slight to moderate departure as a whole for the site stability and watershed function-related Indicators within the C paddocks. Trend data during 1983 to 2012 indicated a generally static trend in persistent litter, basal cover of decreaser grasses, and biological soil crusts at 11S02W15. Decreaser grass basal cover was very low and probably at potential on the sampled area. Bare ground continued a slow decline. Live vegetation and increaser grass basal cover showed some fluctuation and generally static trends, but were both higher in 2012 than in any previous year and may reflect favorable growth conditions in recent years. Although basal cover of increaser grasses is higher at 11S02W15 it appears to have less potential for change than 11S02W25 because of the very high stone cover that is typical of Stony Clayey 12-15 stands.

Trend data during 1983 to 2012 indicated a generally static trend in bare ground and basal cover of decreaser grasses at 11S02W25. Although increaser grasses predominate, basal cover of both increaser and decreaser grasses is relatively low. Increaser grass basal cover increased, particularly after 2004, and was reflected in greater live vegetation cover in 2012. Bare ground was low, reflecting inherently high levels of gravel and rock cover on many Shallow Claypan stands, while biological soil crust cover increased.

Trend data indicated generally static trends in persistent litter, biological soil crust, and in basal cover of decreaser and increaser grasses at 11S02W10. Increaser grasses predominate, and decreaser grass cover is consistently very low. Live vegetation basal cover has shown substantial fluctuation during 1983 to 2012, with marked declines during successive dry periods from 1987 through 1994 and from 1999 through 2004 (2011 Assessment, Introduction page 21), reaching its highest value ever in 2012 after a period of normal to above-normal crop-year precipitation. Increaser grasses have been the largest single component of live vegetation basal cover over the past 30 years.

Trend data during 1983 to 2009 indicated generally static trends in persistent litter, biological soil crust, and in basal cover of live vegetation, decreaser and increaser grasses at 10S2W14. Increaser grasses predominate, while decreaser grass cover has been almost nonexistent during the entire 30-year period of monitoring. Bare ground cover increased sharply between 1987 and 1995; and live vegetation basal cover declined; possibly reflecting plant dieback during the dry period between 1987 and 1994. This study is located in a fine-soiled bottom/drainage, where ponding and flow of water occur seasonally, and high disturbance has occurred in the past. As is typical in Clayey stands, the soil surface is silt loam, which forms physical crusts as it wets and dries. A static trend in desirable cover components is acceptable in stands that have reached their potential composition and cover, although temporal variability may still occur.

BLM established 4 photo plots earlier to monitor use on fine soils within the former Asa Black cattle allotment, which included Wagon Box Basin and essentially the same paddocks. BLM was successful in relocating the Clayey study in Wagon Box Basin (10S02W34A) in 2012. Photo trend based upon plant cover, composition of decreaser grasses, and amount of bare ground was strongly upward since 1976.

In the other D paddocks formerly within the Asa Black cattle allotment, one of the Churning Clay studies was revisited in June 2012 (10S02W10). While plot stakes were not found, the retaken view photos show the site with a higher Idaho fescue component, a lower forb component, and less bare ground than in June 1976. The other Churning Clay study is an intergrade with Stony Clayey stands (10S02W25). The retaken photos show little change since 1981; the study is probably at its potential.

***Evaluation Finding – Pasture 4, All Paddocks are:***

- X Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

***Rationale for Evaluation Finding***

Standard 1 is Meeting the Standard for all pastures because conditions generally represent a watershed that is providing for the proper infiltration, retention, and release of water appropriate to desired conditions related to the watershed's inherent capacity. Indicators used to reach this conclusion included the amount and distribution of ground cover; the lack of erosional evidence and/or impacts to the soil characteristics usually illustrated by rills or gullies, pedestalling, physical soil crusts, and compaction layers.

Specifically, the data associated with the Loamy inclusions was revisited in 2008 to find that replacement of bare ground by perennial grasses was continuing, all perennial grasses were vigorous, and none showed pedestalling. Other observations made within the use area between 1993 and 2005 support the finding that there are smaller areas of bare ground, fewer ponded areas, increases to perennial grasses, and some replacement of older plants in high impact areas. Most soil types are represented by vegetation that illustrated only slight or occasionally moderate departure from reference conditions. Even in areas that exhibited pedestalling, the inventory did not reflect that plant production and litter biomass were below normal.

This allotment falls within the Upper Owhyee Watershed which covers 1.37 million acres. The Big Springs Allotment comprises 15% of the watershed. JB&S pastures account for 83,997 acres or 45% of the allotment and 6% of the watershed area. Rangeland Health Assessments have been performed on all dominant ecological sites in all the pastures in the JB&S since 1995. The data collected within the allotment adequately represents the entire area managed by JB&S. This information also represents at least 3 field visits for RHA, at least 4 field tours with the permittee, at least 3 different field visits per stream for PFC assessments, professional observations, and other relevant information compiled since 1995.

**Information Sources**

Bruneau Management Framework Plan, 1983

Bruneau Rangeland Program Summary, 1983

Ecological Site Description and Reference Sheet, Clayey 12-16 ARARL/FEID, 2014

Ecological Site Description and Reference Sheet, Claypan 12-16 ARAR8/FEID, 2014

Ecological Site Description, Stony Clayey 12-16 ARARL/FEID, 1981

## **Standard 2. Riparian Areas and Wetlands**

### **Desired Conditions**

Proper Functioning Condition (PFC) assessments, field notes, aerial imagery, photographs, and other observations gathered between 1995 and 2014 were used to evaluate the riparian areas, wetlands and stream channel/floodplain standards. Indicators used for evaluation of Standard 2 for riparian systems within the Big Springs Allotment are riparian vegetative structure and function, age class and structural diversity of riparian vegetation, and if noxious weeds are present they are not increasing. Riparian areas are in proper functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, and energy flow. The allotment size (187,825 acres) required that the interdisciplinary team utilize a representative sample of conditions to guide conclusions within this evaluation. PFC assessments were completed on at least 3 different occasions at most streams from 1995 to 2014 assessing a total of 43.8 miles

The Bruneau MFP established the following objectives for native plant communities:

- WL 6: Manage all meadows and riparian habitat ... to obtain a maximum diversity of vegetative species in order to provide for a maximum diversity and optimum abundance of wildlife species.
- WL 4.3: Manage springs, seeps, and meadows and adjacent upland areas as key wildlife habitats for upland game. Specifically: Control livestock grazing on these habitats by the implementation of grazing systems, season of use and other management practices.
- WL 6.1: ... riparian and meadow habitats will be managed to attain and/or maintain a good ecological condition class....or reasonable equivalent. Specifically: Employ livestock management systems/practices/improvements including exclusion of grazing where necessary

## **Pasture 4, All Paddocks**

### ***Synopsis of Assessment Findings***

Table 1 provides a summary of the streams found within the use area and their associated PFC rating. Deep Creek primarily forms the western border for the Black Use Area. All of Deep Creek (11.6 miles) within this use area was in PFC due to the constricted topography of the stream channel. Similarly, the Owyhee River forms the southern boundary of the use area and exhibits constricted topographic features that reduce livestock access; however, it was rated FAR due to the excessive sediment that has reduced the establishment of stabilizing vegetation. Additionally, Dickshooter Creek is also topographically confined and all ten miles within this use area were in PFC.

The majority of Camas Creek was rated in PFC along the lower half of the stream within the use area. This portion is topographically constricted, reducing livestock access. The remainder of Camas Creek (1.2 miles) is fully accessible to livestock and rated in FAR condition. Conversely, the majority of Pole Creek (2.3 miles) was rated in FAR condition.

Of the 16 springs assessed, only three were rated PFC and exhibited little riparian vegetation use or soil disturbance. Seven springs were rated FAR and the remaining six were NF. Seven springs were rated FAR and the remaining six were NF. The FAR and NF springs showed heavy compaction and shearing impacts from excessive hoof action. This has resulted in the reduction in spring flows, the development of

headcuts and channels within these spring/wetland complexes. Over utilization of stabilizing riparian vegetation has reduced these spring/wetland areas from dissipating energy during stochastic events and limited the ability of these areas to recharge ground water resources (i.e., the hydrological cycle no longer functions properly).

Table 1. Miles of stream channels in Black Use Area by PFC rating.

PFC Assessments	PFC (miles)	FAR (miles)	NF (miles)
Deep Creek	11.6	0	0
Owyhee River	0	14.1	0
Camas Creek	4.1	1.2	0
Pole Creek	0.5	2.3	0
Dickshooter Creek	10	0	0
	<b>26.2 (60%)</b>	<b>17.6 (40%)</b>	<b>0 (0%)</b>

***Evaluation Finding – Pasture 4 (all paddocks) are:***

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- X Not meeting the Standard

***Rationale for Evaluation Finding***

The evaluation of indicators for Standard 2 suggest that slightly more than half of the streams (26.2 miles) are PFC. The remaining stream reaches (17.6 miles) and the majority of the springs (7 springs) were FAR primarily due to lack of riparian vegetation. Though no stream channels were rated as NF, six of the 16 springs were NF as a result of excessive hoof action, sparse low vigor riparian vegetation, and over utilization of vegetation. These areas represent a significant proportion of riparian vegetation within the Black Use Area as well as the entire Big Springs Allotment. The team assessed 16 springs out of a total of about 20 known springs within the Black Use Area and determined that only 18 percent were in the PFC category, 44 percent were FAR and about 38 percent were NF.

The IDT selected a representative number of springs, which provided a snapshot for management to develop objectives to ensure that springs are managed in a manner that will meet or make progress towards meeting Standard 2. The team evaluated streams both accessible and not accessible to livestock, and concluded that in riparian/wetland areas accessible to livestock, vegetation cover and vigor was not sufficient to stabilize stream banks as described in the Black Assessment and referenced in the associated surveys. These conditions occurred at livestock accessible FAR portions of Deep, Pole, Nickel, and Camel Creeks. Use of riparian vegetation was consistently high for reaches of the Owyhee River, Camas, and Pole Creeks. The assessments also indicate that these stream reaches are grazed during the hot season, lack bank stabilizing species and the vegetation was low in vigor. Based on the assessment and evaluation, a review of the indicators for Standard 2 lead to the conclusion that the Black use area is not meeting standards.

***Preliminary Causal Factors***

There are three main factors that are contributing to the degradation of riparian-wetland areas in this use area: 1) annual hot season grazing use; 2) high riparian vegetation utilization rates by livestock are

reducing vegetation communities and their overall vigor; and 3) hoof actions along the stream channels and spring/wetland areas was reducing vegetation connectivity and its ability to disperse energy within the system.

## **Information Sources**

Lentic Proper Functioning Condition Assessments; 1995-2012.

Lotic Proper Functioning Condition Assessments; 1995-2012.

## **Standard 3. Stream Channel and Floodplain**

### **Desired Conditions**

Proper Functioning Condition (PFC) assessments, field notes, aerial imagery, photographs, and other observations gathered between 1995 and 2014 were used to evaluate the riparian areas, wetlands and stream channel/floodplain standards. Indicators used for the evaluation of Standard 3 include evidence that a stream's floodplain can be accessed during high flow events, has the ability to dissipate energy during high flow events, expresses stream bank stability, that channel characteristics are in line with the surrounding landscape, and that the floodplain exhibits little evidence of excessive compaction. Stream channels and floodplains are properly functioning relative to the geomorphology (e.g. gradient, size, shape, roughness, confinement, and sinuosity) and climate when they are able to provide for proper nutrient cycling, hydrologic cycling, and energy flow. The allotment size (187,825 acres) required that the interdisciplinary team utilize a representative sample of conditions to guide conclusions within this evaluation. PFC assessments were completed on at least 3 different occasions at most streams totaling approximately 43.8 miles within this use area.

### ***Synopsis of Assessment Findings***

Table 1 provides a summary of the streams found within the use area and their associated PFC rating. The majority of the stream channels within the Black use area have restricted access for livestock use. These areas include Deep Creek, Dickshooter Creek, the lower half of Camas Creek, and portions of the Owyhee River. All of these areas are rated PFC except for the Owyhee River which was rated FAR along its entire length. The upper half of Camas Creek and Pole Creek are available for livestock use and were rated FAR due to the presence of headcuts, historical channel incision events, and channel characteristics not being in balance with the landscape (width to depth ratio, sinuosity, excessive lateral cutting).

### ***Evaluation Finding – Pasture 4 (all paddocks) are:***

- ☐ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☒ Not meeting the Standard

### ***Rationale for Evaluation Finding***

The IDT evaluated streams both accessible and not accessible to livestock and concluded that in riparian/wetland areas accessible to livestock, the stream channels were typically out of balance with the surrounding landscape. The majority of the stream channels within the Black use area have restricted access for livestock use. These areas include Deep Creek, Dickshooter Creek, the lower half of

Camas Creek, and portions of the Owyhee River. All of these areas are rated PFC except for the Owyhee River which was rated FAR along its entire length. The Owyhee River, though having restricted access for livestock utilization, currently has a Total Maximum Daily Load (TMDL) listing for sediment. High levels of sediment are being delivered into the river system as a result of upstream disturbances which was increasing deposition within the stream channel and reducing bank stabilizing riparian vegetation establishment and growth. Sources of this sedimentation are likely the result of a combination of factors including anthropogenic development (diversions, development). Sediment deposition has resulted in the channel characteristics being out of balance with the landscape (floodplain access, width to depth ratio).

The upper half of Camas Creek and Pole Creek are available for livestock use and were rated FAR due to the presence of headcuts, historical channel incision events, and channel characteristics not being in balance with the landscape (width to depth ratio, sinuosity, excessive lateral cutting). Heavy livestock use of the herbaceous vegetation and woody browse in these FAR areas has reduced the establishment of later seral vegetation, reduced bank stability, and limited these channels from stabilizing. Reductions in stabilizing vegetation has reduced these channels from being able to dissipate energy during stochastic events and hampered the natural hydrological cycle.

In conclusion, the evaluation of indicators for Standard 3 led to the conclusion that the Black use area was not meeting standards. Stream segments accessible to livestock were not meeting desired condition as a result of stream bank instability, reduced vegetation cover and vigor to stabilize banks, and excessive hoof action that has resulted in compaction along the stream corridor. Stream channels within this use area were not able to dissipate energy during high flow events and were unable to achieve the full site potential due to inadequate stream bank stabilizing vegetation cover. Additionally, spring/wetland areas showed reduced ability to mitigate stochastic events as a result of over utilization and the associated hoof action.

### ***Preliminary Causal Factors***

Primary contributing factors that have resulted in the degradation of riparian areas within the Black use area include stream channels being out of balance with the landscape (sinuosity, width to depth ratios), shearing and compaction along stream corridors that has destabilized banks or reduced the size of the riparian areas, and the heavy use of vegetation that has resulted in these systems inability to dissipate energy during high flow events. These factors reduce the ability of the streams to overcome stochastic events and maintain or recruit stabilizing riparian vegetation. Similarly, spring/wetland complexes exhibited compaction around spring areas and reduction in riparian vegetation continuity, growth and vigor.

### **Information Sources**

Lentic Proper Functioning Condition Assessments; 1995-2012.

Lotic Proper Functioning Condition Assessments; 1995-2012.

## **Standard 4: Native Plant Communities**

### **Desired Conditions**

Healthy, productive, and diverse native animal habitat and populations of native plants are maintained or promoted as appropriate to soil type, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

- Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
- The diversity of native species is maintained
- Plant vigor (total plant production, seed and seedstalk production, cover, etc.) is adequate to enable reproduction and recruitment of plants when favorable climatic events occur.
- Noxious weeds are not increasing.
- Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

The Bruneau MFP also established the following objectives for native plant communities:

- RM 1 - Develop range programs and management techniques to:
  - Increase 333,552 acres currently in poor range condition to fair condition in 20 years.
  - Increase 343,522 acres currently in fair condition to good condition in 20 years.
  - Maintain the condition class of 283,849 acres currently in good and excellent condition.
- RM 1.5 - Adjust Livestock season of use and/or implement grazing systems on spring and summer ranges to meet minimum growth needs of preferred plant species.
- RM-3: Allocate livestock forage in each allotment in the Bruneau Planning Unit so as to maintain or enhance the range and soil resources.

## **Pasture 4, A Paddocks (Early-Mid Spring Use)**

### ***Synopsis of Assessment Findings***

An ID team sampled indicators of rangeland health at ten locations in all. One of the 10 locations was sampled in 2004 and again in 2012. Two of the 10 assessment locations are paired with long-term monitoring data. The assessment data indicate a general slight to moderate departure for the native plant community indicators.

Although large perennial bunchgrasses were under-represented as a group at many of the assessment locations, they were always present. Annual production was within the natural range of variation at most locations, except two places along Dickshooter Ridge where production was 60-80 percent of potential. Most areas are co-dominated by large perennial bunchgrasses and this group dominates the plant community in some Shallow Claypan sites.

Pedestalled bunchgrass plants were common and active in most cases except three. Few large bunchgrasses exhibited recent crown die-off. Seed heads were seldom observed on interspatial decreaser grasses (except in the 4A4 paddock). Shrub decadence in the south / southwest portion of the pasture was common in 2004, particularly on the Loamy sites.

The trend for vegetation conditions has been static to upward. The original inventory rated most of this area in poor condition in 1982 (USDI 2014). Large perennial bunchgrass frequency has increased at two separate study locations and appears to have increased at a third, photograph monitoring plot. Meanwhile, sagebrush frequency has declined at two of the three monitoring locations. By 2012, much of the Dickshooter Ridge area was in fair to good range condition.

Noxious weeds were not observed. In general, invasive plants are scattered in low concentrations. Cheatgrass and rabbitbrush are common plant community associates on Loamy soils in the 4A3 area. Cheatgrass was also common on one of the concave intermound Claypan 11-13 (13S02W22) RHEs. In addition, soft brome was common on the convex intermound Claypan 11-13 (13S02W16) RHE. Three additional RHE sites throughout the area showed a slight to moderate departure from reference conditions for invasive plants, with scattered and isolated cheatgrass occurrences.

***Evaluation Finding – Pasture 4, A Paddocks are:***

- X Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

***Rationale for Evaluation Finding***

Native plant communities dominate the pasture. Large perennial bunchgrasses were often under-represented but are well represented overall. Although invasive vegetation has gained a foothold in some portions of this area the native plant communities will resist invasive plant dominance in the absence of repeated disturbance. Overall trend for vegetation condition has been upward in the pasture since the early 1980s.

**Pasture 4, B Paddocks (Mid Spring Use)**

***Synopsis of Assessment Findings***

Of the five locations sampled for rangeland health, four exhibited slight to moderate departure for biotic condition ratings. The common indicators for depressed native plant community conditions were attributed to the large bunchgrass group. Large bunchgrasses were under-represented at four of the five sample locations, but were still dominant at three locations.

The lowest vigor and poorest distribution of large bunchgrasses was documented in paddock B.1, known as The Flat, where crown-die out, moderate pedestalling, and plucking were noted at two locations and bunchgrass utilization appeared heavy in 2004. The majority of primary production was estimated to be from shallow rooted bunchgrasses, rather than Idaho fescue or needlegrass. This shift in structural groups was so pronounced in paddock B1 that annual production was estimated at 60 to 80 percent of potential at both sample locations. Some sagebrush stands were also decadent in this area. Elsewhere in the B paddocks, the condition of large bunchgrasses was better.

Large bunchgrasses at two of the three other assessment sites outside of paddock B.1, still exhibited low vigor but were still the dominant plant group, in terms of annual production. Large bunchgrass seed head production and reproductive capability were below expected on interspatial plants; however, vigor and seed head production were good on individuals beneath under shrub canopies. The rubble land

Shallow Claypan (12S02W33) RHE, which has an extremely stony surface, shows good plant vigor, seed head production and reproductive capability. Four of the assessment locations exhibited at least three different species of legumes. Noxious weeds were not detected. Cheatgrass and burr buttercup were scattered in disturbed areas, if present.

Trend since the initial inventory appears to be upward. The majority of this area was rated as poor in 1982 (USDI BLM 2004). By 2012, most could reasonably be classified as fair or good. Several long-term trend studies have been established in the area, all are long-term photograph plots. In all studies, the apparent trend has been either static or upward.

***Evaluation Finding – Pasture 4, B Paddocks are:***

- Meeting the Standard
- X Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

***Rationale for Evaluation Finding***

Trend information suggests that the area is making progress towards meeting the standard but progress is too slow, or even limited in paddock B1. Large bunchgrass plants in paddock B1, known as The Flat, are below potential, both in terms of production and reproductive capability. As a group, these plants are less abundant than the shallow rooted bunchgrasses, despite the fact that large statured bunchgrasses dominate these types of ecological sites in the reference condition plant community phase (USDA NRCS 2014). Although some variation between functional/ structural groups can be driven by natural disturbance factors, such as drought, insect outbreaks, or fire, these factors have been limited at this location.

***Preliminary Causal Factors***

Recent grazing use suggests that the plant community is responding to better management than in years past, except in paddock B1, where repeated use during the critical growing season is inhibiting recovery. The location of paddock B1 in relation to the overall livestock grazing operation lends to the suspicion that current livestock grazing is preventing an upward trend. It may be that trailing activities on the way out, and on the way in are having a more pronounced effect on vegetation in this paddock than elsewhere, particularly if livestock linger there from early to late spring each season.

**Pasture 4, C Paddocks (Late Spring Use)**

***Synopsis of Assessment Findings***

Plant community integrity and native species diversity indicate little, if any departure from reference conditions and most areas support diverse native plant communities. The exception is Clayey ecological sites near water developments where plant communities' integrity was lower than in stony areas. Clayey sites located near the School Section Reservoir located in the southern end of paddock 4C4, is an example where perennial grass abundance is substantially reduced and annual forbs production is high, relative to the reference plant community phase. Annual production there was estimated at 60-80 percent of potential due to a decrease in interspatial grasses. Annual production elsewhere in the paddock was within the natural range of variation for good condition sites.

Noxious weeds were not detected. Bulbous bluegrass was scattered to common at two of the seven RHE sites. Cheatgrass was scattered at one site. Invasive plants were located at the Clayey RHEs located in the 4C4 area.

Trend in the area has been static, to slightly upward since the initial inventory categorized a mixture of good, fair, and poor condition in 1982 (USDI BLM 2014). Since then, several monitoring studies have documented mixed results. Trend in the paddock 4C4 appears to be static to slightly upward, depending on location. A slight upward trend has been detected in the south because Idaho fescue frequency has increased slowly but steadily, while sagebrush frequency has decreased. Further north, the trend has been static to slightly downward because Idaho fescue has been static and needlegrass has declined since 1987. Several long-term photograph monitoring studies in this group of pastures document similar trends. One difference is that photographs all depict upward trends for 'decreaser grasses', a group Idaho fescue would belong.

***Evaluation Finding – Pasture 4, C Paddocks are:***

- ☒ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☐ Not meeting the Standard

***Rationale for Evaluation Finding***

The great majority of these areas support well-functioning native plant communities. Exceptions to this generalization do exist, primarily in the southern end of paddock 4C4, but these are localized to fine-soiled areas within 0.3 miles from water sources. The condition of native plant communities is functioning well enough to resist wide spread establishment of invasive plants, and resilient enough to withstand periodic natural disturbances without long-term loss of any primary components.

**Pasture 4, D & F Paddocks and Wagon Box Basin (Early Summer Use)**

***Synopsis of Assessment Findings***

An ID team sampled rangeland health attributes at 13 sites in 2004. Two of the 13 sites were sampled again in 2012. Of the two sites sampled in 2012, one site (11S01W09) was unchanged from 2004 conditions and the other exhibited a moderate decline in native plant community condition, due largely to decadent sagebrush. By the 2012 assessment, patches of low sagebrush in wagon box basin appeared to be decadent or dying. Juniper appears to be encroaching from shallow breaks along the ridges, into the Claypan sites of Wagon Box Basin.

Nine of the 13 sites assessed in 2004 data exhibited little, if any departure for the biotic integrity indicators. Of the remaining four sites, large bunchgrasses were slightly, to moderately under-represented and exhibited low vigor. Annual production at the great majority of sites was within natural ranges of variation. The exception was at the wagon box basin RHE site 10S02W34, where annual production was 60-80 percent of potential in 2004. Annual production at all but one RHE site was within the natural range of variation for reference conditions. Legumes were reported at six of the 13 RHE sites in 2004.

Trend in these areas has been mixed. Range condition ratings in 1982 ranged from poor to good, depending on location. The majority of paddock 4D3 (Wagon Box Basin), for example was rated in poor condition in 1982, while most of 4D5 (Yellowhouse Flat) was rated fair, and most of 4D2 (Oasis) and 4D4 (Camas Ck.) was rated in good condition (USDI BLM 2014). Trend measurements in 4D4 since the initial inventory have been static, while those in 4D2 and 4D5 have been static to downward. Trend data indicate that current management may be slightly detrimental to the Clayey soils while benefitting Claypan sites. Several repeated photograph monitoring locations document static to upward apparent upward trends in these areas.

Noxious weeds were not observed in 2004 or 2012. Invasive plants at the Clayey RHEs show none to a slight degree of departure, except at one Churning Clay site (10S02W11) where bulbous bluegrass was common in areas. Bulbous blugrass is common in paddock 4D5. Invasive plants were also noted Wagon Box Basin, where cheatgrass was scattered and juniper appears to be encroaching from rims into low sagebrush Claypan sites. Autumn willowweed (a weedy annual species) was encroaching on shrub interspaces at RHE 10S02W34B. No invasive plants were observed at RHE 10S02W28A in 2004. Bur buttercup and bulbous bluegrass were also noted in scattered areas along roads in these paddocks.

The D paddocks outside Wagon Box Basin are exceptionally stony. The stony areas generally received little or no use by livestock in 2000, while utilization was heavy or severe in localized areas where fine, non-stony soils predominated, particularly if water was available. Within Wagon Box, 2004 photos suggest that utilization was heavy at trend site 10S2W34B in 2003, with little regrowth following use. Heavier use of this area occurs about once every third year, with stocking rates up to 12.9 acres/AUM. Precipitation in this area was 11 percent above average in the 2004 calendar year and 16 percent below average in the 2012 calendar year (USDI BLM 2014).

***Evaluation Finding – Pasture 4, D & F Paddocks and Wagon Box Basin are:***

- X Meeting the Standard
- \_ Not meeting the Standard, but making significant progress towards meeting
- \_ Not meeting the Standard

***Rationale for Evaluation Finding***

Standard 4 is being met in these paddocks, particularly on the tables and benches. The RHE sites in the south (A paddocks) and south central (B paddocks) showed the most departure from reference conditions. In the C paddocks, most areas displayed good diversity and high grass vigor and reproductive capability. The large bunchgrasses are slightly below potential in some areas but remain dominant or capable of becoming the dominant grass component overall. Vegetation vigor has been fair, despite recent declines in some sagebrush stands of Wagon Box Basin. Although Standard 4 is also being met in Wagon Box Basin, juniper encroachment may be problematic over the long-term. Juniper do not appear to substantially affect functionality of the native plant communities.

Wagon Box Basin area exhibited some indicators of plant community stress in 2012. Low vigor in the native plant community is likely tied to a combination of below average precipitation and aroga moth defoliation. Juniper will likely continue to encroach into the sagebrush stands of Wagon Box Basin.

Although juniper are not major drivers plant community ecological processes at this time, native plant community condition could degrade over the long-term without some intervention (Miller 2005).

### ***Information Sources***

Miller R.M., J.D. Bates, T.J. Svejcar, F.B. Pierson, L.E. Eddleman 2005. Biology, Ecology, and Management of Western Juniper. Technical Bulletin 152, June. Oregon State University, Agricultural Experiment Station.

USDA NRCS 2014. Ecological Site Description, Claypan 12-16 (RO25XY010ID), MLRA 025-Owyhee High Plateau.

## **Standard 7. Water Quality**

### **Desired Conditions**

Surface and groundwater on public lands comply with the Idaho Water Quality Standards.

### **Pasture 4, All Paddocks**

#### ***Synopsis of Assessment Findings***

Owyhee River, and Deep, Pole, creeks are listed as not meeting water quality standards. Targets for water temperature, sediment, fecal coliform, and water chemistry were not sufficient to meet this standard. Increased water temperature measurements, as a result of inadequate stream shading, were factors that influenced this rating. IDEQ is the final authority on determining water quality in the state.

#### ***Evaluation Finding – Pasture 4 (all paddocks) are:***

- ☐ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☒ Not meeting the Standard

#### ***Rationale for Evaluation Finding***

The Idaho Department of Environmental Quality (IDEQ) evaluated the beneficial use support status within the JB & S Use Area. The Owyhee River and Deep and Pole creeks do not support the Idaho water quality standards (IDEQ Integrated Report 2010). The Owyhee River, Deep Creek, and Pole Creek do not support beneficial uses due to temperature, sediment, fecal coliform, and water chemistry. Standard 7 cannot be met until all beneficial uses are fully supported and are no longer part of the IDEQ Integrated Report.

Those indicators described in Standards 2 & 3 are integral to the support of beneficial uses, however, there are a few indicators that are directly affected by livestock management operations and should be the focus of improvements made within this use area. Specifically, improvements could be made within riparian areas that are accessible by livestock and may include increasing shade outside of confined canyons, reducing concentrations of livestock and associated fecal pollutants near water, and decreasing livestock-related bank erosion.

This use area has about 4 miles of stream that are accessible by livestock, therefore, should be included as potential restoration areas. It must be stated that the impacts to water quality are cumulative, both

temporally and spatially and those impacts that are upstream from the use area are contributing, but outside of the control of livestock management within this allotment.

### ***Preliminary Causal Factors***

The limited data collected by BLM is inconclusive as to the primary causal agent. Deep Creek, and most of Pole Creek were in rated in PFC. In addition, sediment elevations in Deep Creek may originate from upstream sources on private land.

### ***Information Sources***

Idaho Department of Environmental Quality data (2010 Integrated Report), field inspections, water temperature dataloggers, thermograph data, solar pathfinder shade measurements and bacterial sampling. BLM electro-fishing data 2012), IDEQ's Upper Owyhee Subbasin Assessment and TMDL (2010).

## **Standard 8: Threatened and Endangered Plants and Animals**

### **Desired Conditions**

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species. Indicators may include, but are not limited to, the following:

- Parameters described in the Idaho Water Quality Standards
- Riparian/wetland vegetation with deep, strong, binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow-rooted species are a minor component of the floodplain.
- Age class and structural diversity of riparian/wetland vegetation are appropriate for the site.
- Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
- The diversity of native species is maintained.
- The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.
- Noxious weeds are not increasing.

Additionally, the following Bruneau Management Framework Plan (1983) objectives and decisions apply to achieving the desired conditions for this use area:

- RM 5: Provide for protection and conservation of rare and endangered plants...
- WL 2: Manage sensitive species habitats...to maintain or increase existing and potential populations.
- RM 1.1 (1): Implement intensive management (AMPs) on 14 allotments [including Big Springs]. Specifically: Livestock rest or deferment systems would be established on critical sage grouse brood rearing areas.
- WL 2.1: Manage 93,500 acres of bighorn habitat to provide adequate food, cover, water, and space for 420 bighorns by 1990...including 220 for the Owyhee River area:
- WL 4.4: Manage 520,000 acres of sage grouse range...to improve nesting, brood rearing and winter habitats. Specifically: ...all poor and fair big sagebrush, meadow and riparian ecological sites should be improved and managed for good ecological condition....

The WL-AQ 2 Objectives and Decisions listed under Standard 2 are also relevant for Special Status Fish under Standard 8.

## **Wildlife**

### **Pasture 4, A Paddocks (Early-Mid Spring Use)**

#### ***Synopsis of Assessment Findings***

Upland and riparian conditions were assessed for how the use area provided for special status wildlife species. Upland conditions in the A Paddocks were characterized at 10 RHE sites (all in 2004 and one revisited in 2012) and with one sage-grouse nesting assessment. Riparian conditions were assessed with PFC ratings at streams and wetland sites.

Upland vegetation condition is used to characterize habitat for nesting sage-grouse, pygmy rabbits, and big game. Although decreaser grasses were slightly less than expected at sites sampled with RHEs, upland vegetation in the A Paddocks was in good condition and the understory was dominated by these grasses. The one sage-grouse nesting assessment rated suitable with excellent forb and bluebunch wheatgrass cover.

Riparian condition is used to characterize habitat for sage-grouse during late summer and spotted frogs. The one spring in this paddock group rated FAR due to headcuts and livestock impacts and suitable for sage-grouse late brood-rearing activities. Stream segments in this paddock group were comprised of portions of Deep Creek and the Owyhee River. Although these segments were rated as FAR and PFC, sage-grouse would not use them due to the deep canyons in which they flow. These segments are in good vegetative condition (Owyhee River rated FAR due to some sediment deposition) and provide good habitat for other wildlife species (e.g. bighorn sheep) using these areas.

#### ***Evaluation Finding – Pasture 4, A Paddocks are:***

- ☒ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☐ Not meeting the Standard

#### ***Rationale for Evaluation Finding***

The upland vegetation was in good condition in this paddock group. Also, riparian conditions were mostly good where segments of Deep Creek rated PFC and the Owyhee River rated FAR due to the regular scouring nature of the river and sediment deposits in some areas. The one spring in the paddock group ranked suitable for sage-grouse late brood-rearing habitat. Overall, upland and riparian conditions for this paddock group contribute to healthy wildlife populations in the area.

### **Pasture 4, B Paddocks (Mid Spring Use)**

#### ***Synopsis of Assessment Findings***

There were five RHE sites that were used to ascertain upland conditions in the B Paddocks, along with six sage-grouse nesting assessments. Riparian conditions were assessed with four sage-grouse late brood-rearing assessments and PFC ratings at streams and wetland sites.

As in the A Paddocks, decreaser grasses in the B Paddocks were slightly less than expected but were dominated by these grasses. All of the sage-grouse nesting assessments rated marginal but were all in low sagebrush sites where the short stature of the sagebrush lowers the rating of the site for nesting. There was a high abundance and diversity of forbs at all of the nesting assessment sites. Overall, upland vegetation in the B Paddocks was in good condition and contributes toward healthy wildlife populations.

Four lentic sites rated suitable (2), marginal (1), and unsuitable (1) for sage-grouse late brood-rearing habitat, where the marginal and unsuitable sites were associated with nearby, downstream reservoirs. Stream segments in this paddock group were comprised of portions of Deep and Dickshooter Creeks. Segments of both of these creeks in the B Paddocks that rated as PFC (see Fig. 15 in Assessment) were in deep canyons so sage-grouse would not use them but other wildlife species (e.g. bighorn sheep) would benefit from the conditions in these riparian areas.

***Evaluation Finding – Pasture 4, B Paddocks are:***

- X Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

***Rationale for Evaluation Finding***

The upland vegetation was in good condition in this paddock group. Riparian conditions were also mostly in good condition with the exception of two lentic sites associated with reservoirs. Although springs at these sites could be improved, the livestock emphasis of the associated developments likely make meeting PFC more difficult. Even with the lowered quality of these sites relative to sage-grouse and other wildlife, enough high quality riparian habitat exist in the paddock group to sustain healthy wildlife populations in the area.

**Pasture 4, C Paddocks (Late Spring Use)**

***Synopsis of Assessment Findings***

There were seven sites assessed with RHEs and five sage-grouse nesting assessments used to ascertain upland conditions in the C Paddocks. Riparian conditions were assessed with four sage-grouse late brood-rearing assessments and there are no stream segments with hydric vegetation found in this paddock group.

Upland vegetation in the C Paddocks was in very good condition with biotic community conditions close to reference condition. All of the sage-grouse nesting assessments in low sagebrush (4 of 5) rated marginal but the short stature of the sagebrush lowers the rating of these site for nesting. There was a high abundance and diversity of forbs at all of these low sagebrush sites. The one qualitative nesting assessment conducted in this paddock group in big sagebrush rated suitable. Overall, upland vegetation in the C Paddocks was in good condition and contributes toward healthy wildlife populations.

The four lentic sites rated marginal for sage-grouse late brood-rearing habitat in this paddock group. Three of the four exhibited signs of heavy livestock use but were partially protected with rock armoring at the sites. The remaining site did not exhibit heavy livestock use but rated marginal due to a lack of forb abundance and diversity.

***Evaluation Finding – Pasture 4, C Paddocks are:***

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- X Not meeting the Standard

***Rationale for Evaluation Finding***

The upland habitat in the C Paddocks is in good condition and contributes positively to nesting sage-grouse, pygmy rabbits, and big game. However, even though the lentic sites are partially protected with rock armoring and consequently, somewhat resilient to disturbance, the lowered forb abundance and diversity at these sites (on which sage-grouse especially rely during late summer) lessens the ability of the habitat to fully provide for healthy wildlife populations in the area. Degraded conditions at these sites could also jeopardize long term maintenance of late brood rearing habitat for sage-grouse in the C Paddocks.

Livestock impacts have degraded conditions at three of the four springs in this paddock group. Livestock concentration at the springs has resulted in modifications of the plant composition that has decreased the ability of the site to maintain water late into the summer and sustain an abundance and diversity of forbs desirable to sage-grouse and other wildlife species.

**Pasture 4, D & F Paddocks and Wagon Box Basin (Early Summer Use)**

***Synopsis of Assessment Findings***

There were 13 sites assessed with RHEs and 10 sage-grouse nesting assessments used to ascertain upland conditions in the D and F Paddocks. Riparian conditions were assessed with seven sage-grouse late brood-rearing assessments and with PFC ratings at streams and wetland sites.

Upland vegetation in the D and F Paddocks was in good condition with biotic integrity conditions at or close to reference conditions. All of the sage-grouse nesting assessments in low sagebrush (7 of 10) rated marginal but the short stature of the sagebrush lowers the rating of these site for nesting. There was a high abundance and diversity of forbs at all of these low sagebrush sites. Of the remaining sites, the two nesting assessment conducted in this paddock group in big sagebrush rated suitable, whereas the one in silver sagebrush rated marginal. These remaining big and silver sagebrush sites were in good condition. Overall, upland vegetation in the D and F Paddocks was in good condition and contributes toward healthy wildlife populations.

Five of the seven sage-grouse late brood-rearing sites were assessed during 2004 and 2012. Three of these repeated sites showed a drop in rating from 2004 to 2012. The most recent assessments (most in 2012) were comprised of one suitable, three marginal, and three unsuitable. Stream conditions were in good shape with the exception of some segments of Pole and Camas Creeks, which lowers the quality of habitat for sage-grouse and spotted frogs.

***Evaluation Finding – Pasture 4, D & F Paddocks and Wagon Box Basin are:***

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- X Not meeting the Standard

### ***Rationale for Evaluation Finding***

The upland habitat in the D and F Paddocks is in good condition and contributes positively to nesting sage-grouse, pygmy rabbits, and big game. However, lotic and lentic sites assessed for sage-grouse late brood-rearing conditions showed a lowered ability to provide for healthy wildlife populations in the area. Ratings for PFC in sections of Pole and Camas Creeks also exhibited degraded conditions. Consequently, riparian conditions at some of the sites in this paddock group could jeopardize long term maintenance of late brood rearing habitat for sage-grouse, as well as habitat for spotted frogs.

### ***Preliminary Causal Factors***

Livestock impacts have degraded conditions at many of the lentic and some of the lotic sites in this paddock group. Livestock concentration at the springs and along some segments of stream has resulted in modifications of the plant composition that has decreased the ability of these sites to maintain water late into the summer and sustain an abundance and diversity of forbs desirable to sage-grouse and other wildlife species, as well as provide shade and persistent water for spotted frogs.

### **Information Sources**

Stream and spring functioning condition assessments for Standard 2  
Upland Health assessments and trend studies for Standard 4  
Sage grouse lek (mating ground) surveys by helicopter during April-May 2004-2013  
IDFG sage grouse historical lek database, 2003  
IDFG and BLM telemetry studies of sage grouse, 2002-2013  
Sage grouse habitat assessments in 2004, 2005, and 2012  
Idaho Fish and Wildlife Information System database  
General wildlife field observations in 2004, 2005, and 2012

### **Fish**

#### ***Synopsis of Assessment Findings***

Water temperatures in Deep Creek and Pole Creek are too warm to maintain a viable population of redband trout.

#### ***Evaluation Finding – Pasture 4 (all paddocks) is:***

- ☐ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☒ Not meeting the Standard

### ***Rationale for Evaluation Finding***

Water temperatures in Deep, Pole, or Camas creeks do not provided the cooler water temperature regime needed to support a viable redband trout fishery.

### ***Preliminary Causal Factors***

To the extent that water quality impairment (temperature) is the result of current and/or historical livestock grazing, historical private land use practices, natural back-ground heating, or a combination of factors is difficult to determine.

## Information Sources

Idaho Department of Environmental Quality data (2010 Integrated Report), field inspections, water temperature dataloggers, thermograph data, solar pathfinder shade measurements and bacterial sampling. BLM electro-fishing data 2012), IDEQ's Upper Owyhee Subbasin Assessment and TMDL (2010).

## Plants

### Pasture 4, A Paddocks (Early – Mid Spring Use)

#### ***Synopsis of Assessment Findings***

One population each of Owyhee River forget-me-not (*Hackelia ophiobia*) and Simpson's hedgehog cactus (*Pediocactus simpsonii*) are found in the 4A paddocks. Both are well protected by inaccessible habitat. The Owyhee River forget-me-not is located in talus slopes of the Owyhee River Canyon where cattle do not graze. The Simpson's hedgehog cactus grows on rocky soils distant from water and is therefore protected from most cattle use.

#### ***Evaluation Finding – Pasture 4, A Paddocks is:***

- ☒ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☐ Not meeting the Standard

#### ***Rationale for Evaluation Finding***

Pasture 4, A Paddocks are meeting the standard because of the habitat is intact and not impacted by grazing or other factors.

### Pasture 4, B Paddocks (Mid Spring Use)

#### ***Synopsis of Assessment Findings***

Two populations of Bach's downingia (*Downingia bacigalupii*) are located in these paddocks. One population is located along Dickshooter Creek where water is not impounded and cattle do not typically congregate. As a result, there were high concentrations of downingia, particularly in the canyon portion of the creek. The second population of downingia is located at Dickshooter Reservoir and receives greater livestock impacts such as trampling of vegetation and pugging of soils. This population has fluctuated over the years between 50 to 300 individuals. Habitat condition declined between 2005 and 2009 and a rangeland health assessment in nearby uplands showed increases in annual forbs and decreased perennial grass production.

There is also one known population of Owyhee River forget-me-not located in these paddocks. As stated above, grazing impacts are not a threat to this species due to its remote and inaccessible habitat.

#### ***Evaluation Finding – Pasture 4, B Paddocks is:***

- ☒ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☐ Not meeting the Standard

### ***Rationale for Evaluation Finding***

The pasture is meeting the standard because of the high proportion of the population in Dickshooter Creek that is in good condition and has an armored and rocky habitat. Dickshooter Reservoir may always receive relatively high levels of livestock use but the Dickshooter Creek population can allow for long term vigor of the species if proper management continues.

### **Pasture 4, C Paddocks (Late Spring Use)**

Two populations of Bach's downingia are located in these paddocks. Both populations are at reservoirs and receive impacts to habitat such as trampling and mechanical damage to soils. Despite these impacts, the plant populations have managed to maintain population numbers of at least 500 individuals. Impacts to soils may be moderate enough that establishment sites are still available for Bach's downingia.

### ***Evaluation Finding – Pasture 4, C Paddocks is:***

- ☒ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☐ Not meeting the Standard

### ***Rationale for Evaluation Finding***

This pasture is meeting the standard because the populations have been able to sustain relatively high numbers despite the concentrated use at the reservoir habitat.

### **Pasture 4, D and F1 Paddocks (Early Summer Use)**

Three populations of Bach's downingia and one population of thinleaf goldenhead (*Pyrrocoma linearis*) are located in these pastures. The Bach's downingia populations exhibit a range of conditions from heavily disturbed reservoir habitat to moderately disturbed intact habitat. Habitat not associated with a reservoir showed heavy levels of use and an increase in bulbous bluegrass. Rangeland health assessments located nearby show that overall plant vigor has decreased.

There is also one population of thinleaf goldenhead located within the Wagon Box Basin Pasture 4D3. During an initial site visit conducted in 1995, several hundred plants were located and the population vigor was assessed as good. In 2012 the population was assessed as having good vigor but low population numbers with less than 50 individuals. The rangeland health assessment for the Wagon Box Basin shows a slight to moderate departure from expected conditions. Pedestalling of grasses, plant mortality, and bunchgrass crown die-out were higher than expected. This suggests less than optimal habitat conditions for thinleaf goldenhead.

### ***Evaluation Finding – Pasture 4, D and F1 Paddocks is:***

- ☐ Meeting the Standard
- ☐ Not meeting the Standard, but making significant progress towards meeting
- ☒ Not meeting the Standard

### ***Rationale for Evaluation Finding***

These pastures do not meet the standard because habitat quality for these two species is less than desired for long term persistence of the species. Heavy mechanical disturbance of soils not only limits the amount of germination sites but also allows for increase spread of invasive species such as bulbous

bluegrass. Populations near Yellow House Reservoir showed signs of heavy grazing such as abundant bare ground, short stubble heights, and invasive plants.

### ***Preliminary Causal Factors***

Current livestock grazing is causing excessive disturbance to habitat through disturbance to soils where Bach's Downingia grows. Reductions in thinleaf goldenhead populations may be a result of grazing induced habitat changes such as plant pedestalling and mortality.

### **Information Sources**

Species specific site-visits to known populations of special status plants (SSP) and historic population information are on file at the BLM. Locations of known populations of SSP were identified using the Idaho Fish & Game Conservation Data Center (CDC) database and BLM field office maps. Data for species listed on the 2004 BLM sensitive species list were collected. Only known populations of BLM SSP occurring in the Big Springs Allotment were analyzed. Inventory work for SSP in this area has been limited. However, known populations in the Big Springs allotment were revisited during the spring and summer of 2004, 2005, and 2009. A new one was located in this Use Area in 2009.

### **IS A DETERMINATION REQUIRED?**

☐ All Standards are met or making significant progress towards meeting and there is conformance with the guidelines. No Determination is required, review is complete.

☒ One or more Standards is not being met or there is non-conformance with the guidelines. ***An Authorized Officer's Determination of causal factors is required.***